

ABSTRACT

The invention provides low temperature NO₂ trap compositions useful for adsorbing NO₂ from a gas stream at lower temperatures, and releasing the NO₂ at higher temperatures.

The low temperature trap compositions are useful for incorporation into a diesel exhaust system equipped with a soot filter. The NO₂ from the diesel exhaust can be stored when the exhaust temperature is cool, e.g., during startup and at times of low load, and

released when the exhaust is at higher temperatures. The released NO₂ serves as an effective oxidant for the combustion of soot deposited on the soot filter. These

temperatures are significantly lower than those required for the combustion of soot using

O₂ as an oxidant. The methods of the invention thereby provide a method for regenerating the soot filter within operating temperature ranges typical of diesel engine exhaust systems.